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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,690	12/14/2001	Toshiaki Iwafuchi	0112857-306	2929
29175	7590	01/12/2005	EXAMINER	
BELL, BOYD & LLOYD, LLC			EVERHART, CARIDAD	
P. O. BOX 1135			ART UNIT	
CHICAGO, IL 60690-1135			PAPER NUMBER	
			2825	

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/024,690	<b>Applicant(s)</b> IWAFUCHI ET AL.	
	<b>Examiner</b> Caridad M. Everhart	<b>Art Unit</b> 2825	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,9,11,12,14-31 and 33-74 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 36-53 is/are allowed.
- 6) ☒ Claim(s) 1,3,4,9,12,14-31,33,54-60,62-66 and 68-73 is/are rejected.
- 7) ☒ Claim(s) 11,23,24,34,35,61,67 and 74 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>16-3-03</u> | 6) <input type="checkbox"/> Other: _____  |

Applicant's arguments filed 10-18-2004 have been fully considered but they are not persuasive with respect to claims 1,3,4,9,15-22,26-31,33,54-60,62-66, and 68-73. With respect to claim 14, applicant's arguments were persuasive and a new rejection in view of newly found reference follows below.

The previously indicated allowability of claims 12 and 25 are withdrawn in view of newly found prior art. The rejections in view of the newly found prior art follows below.

#### Response to Arguments

Applicant has argued (1)that Kneissl does not disclose selectively irradiating an interface between a first substrate and the device included on the first substrate to selectively release the device from the first substrate such that it can be transferred to a device holding layer on a device holding substrate. Applicant has further argued (2)that this allows a selective portion of devices to be released from the first substrate and transferred to the holding substrate where another portion of the devices remain on the first substrate and thus are not transferred to the holding substrate, and (3)that Kneissl does not provide the selective irradiation of a substrate to allow the subsequent selective release of a device from the substrate at an interface between the device and the substrate. These arguments are respectfully found to be not persuasive for the following reasons. With respect to argument (1), it is believed that the thin layer of GaN, layer 1130 in Fig. 11B is an interface that is selectively irradiated, because Kneissl teaches that the substrate is transparent to the radiation and the layer of GaN is selectively decomposed(col. 7, lines 60-67 describes the layer 1130). The device is described in col. 7, lines 29-35 and is in the layer 1110. This layer is seen in Fig. 11C to

be separated from the substrate 215 and transferred to a temporary substrate. This substrate is subsequently separated from the device, which is transferred to a permanent substrate in Fig. 11E and 11F.

With respect to argument (2), the claims do not recite the separation of selective portions of the device layer, but rather the "irradiating, selectively , an interface between a first substrate and a device included on the first substrate...", which it is believed is taught by Kneissl, as argued above and in the last Office Action.

With respect to argument (3), it is believed that for the reasons argued against arguments (1) and (2), that Kneissl does teach the selective irradiation of a substrate and the subsequent release of a of a device from that substrate.

In addition, Kneissl also discloses a cleaning step (col. 8, lines 12-24) after a transfer step.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 102***

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1,3,4,9,15-22,26-31, 33,54-60,62-66, and 68-73 are rejected under 35 U.S.C. 102(e) as being anticipated by Kneissl et al (US 6,757,314B2).

The reasons are as stated in the Office Action mailed 7-27-04 and as argued above.

Claims 12 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Park, et al. (US 2002/0082543A1).

Park, et al disclose forming a device with pointed devices on the substrate(Fig. 1b) inserting into a silicone layer (layer 23 in Fig. 1c), and curing(paragraph 0139), and providing recessed portions to the silicone layer(Fig. 1d). With respect to the coating with a release agent, it is inherent in the step in which the pointed devices are inserted into the silicone layer, because silicones are known in the art as release coating agents.

***Claim Rejections - 35 USC § 103***

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Balz (US 4,383,967) .

Balz discloses a silicone mold with pyramidal cavities in which devices fit(col. 3, lines 40-45 and col. 6, lines 37-40). The cavities may be pyramidal or conical and cylindrical(col. 10 lines 62-67). There is a support for the silicone mold (col. 12, lines 24-38 and feature 13 in Fig. 1).

Balz discloses the support, which is interpreted as the substrate. Although Balz does not disclose the support and the silicone layer as a holding substrate, this recitation in the preamble of the claim is a use, and the device, not the use is rejected. It would have been obvious to one of ordinary skill in the art at the time of the invention that the mold disclosed by Balz is also a support for the devices.

***Allowable Subject Matter***

Claims 36-53 are allowed.

Claims 11,23,24,34,35,61,67, and 74 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caridad M. Everhart whose telephone number is 571-272-1892. The examiner can normally be reached on Monday through Fridays 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on 571-272-1907. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
CARIDAD EVERHART  
PRIMARY EXAMINER

C. Everhart  
1-6-2005